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3. (Amended) The method of claim 1, wherein the substrate is heated during deposition.

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- 28. (Amended) The method of claim 24 when appendant upon claim 4, wherein the flow of the carrier gas is provided such as to maintain the decreasing temperature gradient.
- 29. (Amended) The method of claim 1, wherein the aerosol is delivered to the substrate such as to achieve a film growth rate of at least 0.2 μm per minute, preferably at least 1 μm per minute, more preferably at least 2 μm per minute.
- 64. A method of fabricating a powder, preferably an ultrafine powder, comprising the steps of:

providing a heated zone:

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generating an aerosol comprising droplets of a material solution;

providing a nozzle unit for delivering the aerosol to the heated zone, the nozzle unit including at least one outlet through which a directed flow of the aerosol is delivered and at least one electrode;

charging the aerosol droplets with a positive or negative charge;

providing a flow of the aerosol through the nozzle unit so as to deliver a directed flow of the aerosol from the at least one outlet; and

generating an electric field between the heated zone and the at least one electrode such that the directed aerosol flow is attracted towards the heated zone where the aerosol droplets react homogeneously in the gas phase to form a powder.